500 SERIES SCOPE & 4400 SYSTEM
A SOLUTION FOR IMPROVED NEXT GENERATION ENDOSCOPY
REALIZED BY FULLY DIGITAL TECHNOLOGY

With advanced total solutions, FUJINON is ready to fulfill a broad range of on-the-scene needs in the endoscopic diagnosis.

500 SERIES SCOPE features leading-edge optical technologies to provide clear, bright endoscopic images for easier and more accurate diagnosis.

It is also kind to users with its grip ergonomically designed for extremely smooth handling.

The fully digital processor 4400 SYSTEM employs state-of-the-art digital signal processing. This system, compatible with FICE, the image processing function to improve image visibility, takes the fullest advantage of being fully digital.

Fujinon’s endoscopy system is a total solution to support image input, processing and sharing, surely contributing to more efficient endoscopy from now on with its excellent performance.
Fits right. Moves agilely. Light-weight grip for high operability.

The newly developed grip fits gently into your hand, allowing full use of this high-performance endoscope. Materials, processing, and choice of parts have all been reviewed to reduce the grip weight for greater maneuverability.

The design is improved also to allow easier cleaning and disinfection.

G-5 GRIP and 500 SERIES SCOPE in combination offer you added amenity in routine diagnosis.

Improved Operability

New positioning of the functional switches, Air/Water and suction buttons minimizes finger travel and improves efficiency.

Water Jet Function

Main endoscopes for the lower gastrointestinal tract have a water jet nozzle in addition to the forceps channel. Mucosa is effectively removed for a clear view of the surface being examined.

Improved Cleaning and Disinfection

Cleanliness and safety focused on full defence against disinfection. Easily reused Air/Water button is removable and interchangeable. A non-slip, flat surface ensures all areas receive optimal contact with cleaning and high-performance disinfecting solutions.

Light-weight Connector

The connectors incorporated in the 500 SERIES SCOPE are slim, lightweight, and easy to handle. Procedures are now considerably less burdensome when the endoscope has to be removed/replaced for cleaning and disinfection on every occasion of endoscopy.

Flexible Portion

In upper and lower gastrointestinal endoscopy, the great flexibility of the endoscope allows easy insertion and the comfort of the examinee to control, meeting the needs of the examiner.
Fully digital processor 4400 leads the quality of diagnostic imaging to a higher stage.

With the processor and the light source unit employing state-of-the-art digital signal processing, it retains image fitness and precision in picture quality even when viewing microvessels or mucosal surfaces. It also features an HD (High Definition)-compatible processor providing even sharper images with HD signals. On the operation panel are illuminated buttons with pictograms, which are access-friendly during the examination.

Blood Vessel Enhancement (BLV) Function
Detailed images of vein patterns are useful for advanced diagnosis of alimentary canals. The Blood Vessel Enhancement Function improves the projection and clarity of vein patterns. (These steps available by switching)

Automatic Light Control (ALC) Illumination Adjustment Function
The 4400 employs Fujinon's unique new form of automatic light control. This new advanced system reduces light halation and provides images that are easier on the physician's eyes.

Integrated Compact Flash Media Card Slot
The CF card slot allows direct recording and reproduction of images in the CF card, a popularly used media. Large-size image files captured with a high-resolution endoscope are stored as digital still images without any deterioration. Images can be transferred to a PC without going through too many steps.

Internal Image Storage Capacity
The processor incorporates a buffer memory whose capacity is more than enough for images of one examination regardless of compression rates. It is convenient for quickly reproducing captured images immediately after the examination. Physicians can reproduce images and give instantly a post-examination explanation to the patient or select required images to be printed.

Examination Switch
This newly incorporated switch allows for attachment and removal of the endoscope without turning off the power to the processor unit. After finishing an examination, a simple press of the button allows the removal and cleaning of the endoscope while the processor continues to communicate imaging data to the network or Compact Flash card.
FICE (Flexible spectral imaging Color Enhancement)

FICE spectral image processing technology widens the potential of endoscopic diagnosis.

Accurate and reliable endoscopic examination and diagnosis require detection of subtle structural and color changes such as elevation, depression, and superficial patterns of lesions. However, endoscopic images may differ significantly depending on the wavelength of light used for observation. FICE constructs spectral images from rays having specific wavelengths which are useful for better enhancement of tissue aspects and vessels.

The scope switch allows the physician to switch between conventional image and the FICE image in a split second, ensuring an uninterrupted examination with the eyes always concentrated on the monitor.

FICE overview
Endoscopes display images on the monitor by directing white light of undulating spectrum (400nm to 700nm) from a xenon lamp onto the tissue and capturing reflected light with a CCD device.

FICE furthermore processes the conventional images into spectral images composed from rays having specific wavelengths and displays them in real-time.

Ten patterns of wavelengths can be preset
FICE has ten preset wavelength patterns that are ready for use in the clinical setting. Moreover, you can manually alter the preset wavelengths in 5-nm increments and the gain in five steps.

<table>
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<tr>
<th>PRESET No.</th>
<th>Red (nm)</th>
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<th>Blue (nm)</th>
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FICE image sample of a boundary/region examination
Gastric picture

Conventional

FICE image
DOUBLE BALLOON ENDOSCOPY

Two balloons realize better insertability into the depth of digestive tract.

The small intestine has long been the most difficult organ to access in gastrointestinal endoscopy, therefore it has been known as “The Dark Continent.”

With new engineering innovation, Fujinon's Double Balloon Endoscope System designed for the small intestine is equipped with exclusively developed balloons, overtubes and balloon pump controller. Two balloons improve the insertability of the endoscope into the small intestine.

Balloon Pump Controller PB-20

The PB-20 Balloon Pump Controller is designed to simplify operation. Balloons can be easily controlled via a hand-operated remote control or foot switch, whichever is more convenient for the physician.

Enteroscope - Standard Type
EN-450P5/20

EN-450P5/20 is an endoscope for the small intestine examination. The relatively slim overtube (2.2mm outer diameter) of the EN-450P5/20 allow for smooth insertion via both the antegrade and retrograde routes depending on the position of lesion.

- Viewing direction 9° (Forward)
- Field of view 120°
- Illumination range 0~1,000 lux
- Standard diameter 9.2mm
- Fluid passage diameter 9.2mm
- Steering capability UP 160°, DOWN 160°, RIGHT 160°, LEFT 160°
- Working length 2,900mm
- Total length 2,600mm
- Foreign material diameter 2.2mm

Enteroscope - Treatment Type
EN-450TS, EN-450TS/W

Treatment capacity has been greatly expanded with the EN-450TS and EN-450TS/W, which are equipped with a 2.4mm foreign material channel that allows the use of almost all general therapeutic accessories and a variety of accessories such as APC Probe, Clip, Electrohydraulic Balloon, and other therapeutic instruments.

- Viewing direction 9° (Forward)
- Field of view 120°
- Illumination range 0~1,000 lux
- Standard diameter 9.2mm
- Fluid passage diameter 9.2mm
- Steering capability UP 160°, DOWN 160°, RIGHT 160°, LEFT 160°
- Working length 2,600mm
- Total length 2,600mm
- Foreign material diameter 2.2mm

Colonoscope - Standard Type
EC-450B15

Using balloons, the endoscope is stabilized in the intestinal tract, which leads to better observation and treatment of lesions.

- Viewing direction 9° (Forward)
- Field of view 120°
- Illumination range 0~1,000 lux
- Standard diameter 9.2mm
- Fluid passage diameter 9.2mm
- Steering capability UP 160°, DOWN 160°, RIGHT 160°, LEFT 160°
- Working length 1,620mm
- Total length 1,620mm
- Foreign material diameter 2.2mm
ENDOSCOPIC ULTRASONOGRAPHY

Fujinon's high quality digital imaging enables ideal ultrasonographic diagnosis.

Fujinon has developed endoscopic ultrasonography systems for both radial ultrasound scanning and convex ultrasound scanning which satisfy the most stringent requirements: "clear image projection" and "excellent usability". The SU-7000 processor and the EG-550UR and EG-550UT ultrasound endoscopes provide excellent ultrasound endoscopic images.

Endoscopic Ultrasonography

The SU-7000 all-in-one high-quality ultrasonography to be incorporated with conventional endoscopy into a single cart, resulting in a highly functional, compact system. Integration of Fujinon's high-performance endoscopy with a state-of-the-art ultrasonography system allows physicians to make the best use of limited examination space without compromising diagnostic and therapeutic quality.

ENDOSCOPE

EG-530UR, EG-530UT

EG-530UR and EG-530UT endoscopes combine Fujinon’s high-quality endoscope features with the most advanced ultrasound technology, to create an unparalleled diagnostic and treatment system.

Observation Performance

For an endoscopic image, our SUPER CCD chip provides high-resolution and high-color, faithfully-reproduced images, which make it possible to distinguish minute differences in the all-important red spectrum including tiny blood vessels.

High Resolution Image

For an ultrasonic image, our original digital image processing optimizes the gradation sequence of images, resulting in providing better ultrasonicographic images.

Radial Scan Ultrasound Video Endoscope

EG-530UR

With a slim distal end of 11.4mm and excellent bending capabilities, the EG-530UR allows physicians to perform endoscopic ultrasonography in a similar way to conventional endoscopy. The scope-tip bending angle permits observation of previously difficult to access areas.

Convex Scan Ultrasound Video Endoscope

EG-530UT

With its flexo-channel elevator function, the distal end of EG-530UT improves the injection performance of the puncture needle. It also has a large channel which enables various treatment accessories to be inserted. With excellent bending capabilities, the EG-530UT provides better access to lesions and greater flexibility in treatment.
SUPER CCD equipped Electronic Endoscopes

High Quality Image Endoscopes
Super CCD equipped Electronic Endoscopes

Using the progressive scan method which prevents deteriorated resolution, the SUPER CCD captures still images in high definition. The images have little chromatic noise and appear as real images even when the screen is frozen. The SUPER CCD provides not just high-resolution images, but using the RGB filtering capability, it also provides vivid colors in the red spectrum which are important in endoscopic diagnosis. It is a high-quality endoscope born in the digital imaging era.

Using Progressive Scan Method
Panasonic’s SUPER CCD captures the high-quality images. The quality of images taken by SUPER CCD is one rank higher than the image from conventional high-quality endoscopes, which enables easier detection of minute lesions.

SUPER CCD
590 SERIES ENDOSCOPE

For the Upper G.I. Tract - Standard Type
EG-590WR

This endoscope is reasonably slim with a distal end of 9.8mm, yet is equipped with adequate functions necessary for routine examinations. This is a high-definition standard endoscope. The airwater nebulizer is redesigned to constantly secure a clear field of view, and its water filtering function is significantly improved.

For the Lower G.I. Tract - Optical Magnification
EC-590ZW/M, EC-590ZW/L

These optical magnifying endoscopes for the lower G.I. tract have a water jet function which is effective for washing off mucus and securing a better field of view. This endoscope has a wide variety of functions such as a large 9.8mm image channel, optical magnifying function and water jet function.

For the Lower G.I. Tract - Standard Type
EC-590WM, EC-590WI, EC-590WL

These endoscopes for the lower G.I. tract routine examinations have a ultra wide 140° field of view, a large 9.8mm channel and also a water jet function which is effective for washing off mucus.
High quality 530 Series Endoscope covers screening, diagnosis and treatment.

530 Series Endoscope Features high quality endoscopes which serve various kinds of examination and diagnosis. Transnasal endoscope that is easy for the examiners, multi-purpose endoscope for various purposes, and lower G.I. endoscope with a large channel and strong suction power — these are among many scopes available to choose from depending on the examination purpose.
**530 Series Upper Gastrointestinal Endoscopes**

**For the Upper G.I. Tract - Treatment Type**

**EG-530CT**

With the forceps channel as wide as 3.8mm, EG-530CT's distal end is as slim as 10.8mm in diameter. Water jet function is also incorporated for removing tissues.

- **Viewing direction**: 0° (Forward)
- **Field of view**: 100°
- **Observation range**: 3 - 180mm
- **Diameter and diameter**: 13.7mm
- **Flexible part of diameter**: 16.5mm
- **Reaching capacity**: UP 210° / DOWN 90° / RIGHT 130° / LEFT 130°
- **Working length**: 1,980mm
- **Total length**: 1,400mm
- ** Forceps channel diameter**: 3.8mm

**For the Duodenum**

**ED-530XT**

The structure of the distal end, bending portion and flexible portion is changed for improved maneuverability during examination and treatment.

- **Viewing direction**: 90° (Forward)
- **Field of view**: 100°
- **Observation range**: 4 - 180mm
- **Diameter and diameter**: 12.3mm
- **Flexible part of diameter**: 16.5mm
- **Reaching capacity**: UP 100° / DOWN 90° / RIGHT 130° / LEFT 90°
- **Working length**: 1,010mm
- **Total length**: 1,050mm
- **Forceps channel diameter**: 4.2mm

**EG-530D**

EG-530D is an endoscope for treatment of the upper G.I. tract, having two forceps channels, 3.8mm and 2.8mm, and a distal end as slim as 11.5mm. Water jet function is also incorporated for various treatment methods during endoscopy.

- **Viewing direction**: 0° (Forward)
- **Field of view**: 100°
- **Observation range**: 3 - 180mm
- **Diameter and diameter**: 13.7mm
- **Flexible part of diameter**: 16.5mm
- **Reaching capacity**: UP 210° / DOWN 90° / RIGHT 130° / LEFT 130°
- **Working length**: 1,040mm
- **Total length**: 1,400mm
- ** Forceps channel diameter**: 3.8mm / 2.8mm
530 Series  Lower Gastrointestinal Endoscopes

For the Lower G.I. Tract - Standard Type
EC-530WM, EC-530WI, EC-530WL

With a wide field of view of 140°, these lower G.I. tract endoscopes have a greater resolution at the image edges. Flexible inserted portion and operation portion with lightweight grip facilitates insertion.

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<td>Passage channel diameter</td>
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</table>

For the Lower G.I. Tract - Treatment Type
EC-530MT, EC-530IT, EC-530LT

With a large channel of 3.8mm accommodating various treatment accessories, these lower G.I. tract endoscopes are suited for examination and treatment, which also have a rapid suction function.

<table>
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<th>Type</th>
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<td>Bending capacity</td>
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<td>Working length</td>
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<td>Total length</td>
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<td>Passage channel diameter</td>
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</table>

For the Lower G.I. Tract - Slim Type
EC-530MP, EC-530LP

These are slim type endoscopes for lower G.I. tract with the distal end of 11.0mm. While these two slim-end type scopes have improved insertability, they retain a 3.2mm scope channel to accommodate various treatment methods.

<table>
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